

Marine Corps Installations East-Marine Corps Base Camp Lejeune (MCIEAST-MCB CAMLEJ) Restoration Advisory Board (RAB) Meeting Minutes

MEETING DATE: May 23, 2013

LOCATION: Coastal Carolina Community College, Business Technology Building, Room 105 in Jacksonville, North Carolina

ATTENDEES:

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| Charity Rychak/MCIEAST-MCB CAMLEJ | Leonard McAdams/RAB Member |
| Patti Vanture/MCIEAST-MCB CAMLEJ | Richard Mullins/RAB Member |
| Bryan Beck/NAVFAC Mid-Atlantic | Amy Poe/RAB Member |
| Dave Cleland/NAVFAC Mid-Atlantic | Karen Sota/RAB Member |
| Randy McElveen/NCDENR | Dale Weston/Guest |
| Michael Curtis/RAB Co-Chair | Chris Bozzini/CH2M HILL |
| Laura Bader/RAB Member | Kim Henderson/CH2M HILL |
| Jerry Ensminger/RAB Member | Matt Louth/CH2M HILL |

FROM: Kim Henderson/CH2M HILL

DATE: June 11, 2013

I. Welcome and Introductions

Ms. Rychak began the meeting and reviewed the agenda. The Base is working on recruiting new members and included information in the public notice.

Gena Townsend with EPA could not attend this meeting because EPA is furloughed tomorrow.

II. UXO-06 Remedial Investigation Update

Objective: Review the site history, provide a summary of the Remedial Investigation (RI) activities, and discuss next steps.

Overview: A presentation was reviewed by Mr. Louth. UXO-06 is the former Fortified Beach Assault area and was used as a training area from the 1950s through the 1970s. Previous investigations to clear areas for military construction (MILCON) of an Armory and for the borrow pit expansion area and a Preliminary Assessment/Site Inspection (PA/SI) under the Munitions Response Program (MRP) were conducted from 2006 through 2011. Findings to-date indicated there are no unacceptable risks to human health or the environment in site media (e.g., soil, groundwater, surface water, sediment). However, over 2,000 munitions-related items were identified and some items were adjacent to the site boundaries in the cantonment area. Several explosive items were destroyed on-site via controlled detonations, post-detonation soil samples was conducted, and no unacceptable risks to human health or the environment were identified in the soil.

An RI was completed in 2012 and included additional investigation adjacent to the site boundaries. During the RI, 3,252 targets were identified and investigated. The majority of the items were cultural debris (non-munitions-related items). Over 175 munitions-related items were identified and included practice rockets, rifle grenades, and small arms ammunition. Most of these items were identified in the area northeast of the initial RI boundaries. Therefore, additional RI activities are planned in the northeast area to complete the site delineation for the RI.

An Explosives Safety Submission (ESS) Amendment is being prepared to cover this additional area and is planned for submittal in June 2013. Once the ESS is approved the additional RI activities will be conducted this summer followed by the draft report this winter.

III. Long-Term Monitoring Update

Objective: The purpose of this agenda item was to provide an update on the Fiscal Year (FY) 2012 long-term monitoring (LTM) for Sites 3, 6, 35, 36, 73, 78, 82, and 93.

Overview: Mr. Bozzini reviewed a presentation of the LTM program, findings, and path forward for each site as follows:

- Site 3 – The LTM program includes annual groundwater sampling for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) SVOCs at four monitoring wells. The findings indicate that VOCs are not detected, SVOCs are detected. The SVOCs, benzo(a)anthracene and naphthalene, have been detected above the cleanup levels. Based on the results over time, the path forward is to reduce the LTM frequency to every two years, reduce the LTM analytes to the detected SVOCs only, and maintain land use controls (LUCs).
- Site 6 – The LTM program included annual groundwater sampling for VOCs at eight wells. During LTM, chlorobenzene was detected in groundwater at fluctuating concentrations over time and a time-critical removal action (TCRA) was conducted in 2011 to remove drums that were identified as the potential source. Additional groundwater investigation was conducted in 2012-2013 to define the extent in groundwater the LTM was suspended during the additional investigation. Based on the results, the LTM program is being re-evaluated to encompass the chlorobenzene plume and will be reinitiated in 2014. LUCs are in-place and are protective. The RAB members question potential impacts to Wallace Creek. The chlorobenzene plume is not close to the creek and the source has been removed. If during LTM, the plume is identified advancing towards the creek, additional actions would be evaluated.
- Site 35 – The LTM program includes quarterly groundwater sampling at 10 wells to evaluate the air sparging system and annual groundwater sampling for VOCs for monitored natural attenuation (MNA) at 37 wells with MNA parameters every five years. The findings indicate that the air sparging met the treatment objectives and the system was turned off in 2013, MNA concentrations are gradually decreasing over time, and compounds are not migrating off site. The recommended path forward is to continue annual monitoring, optimize the monitoring well network, and maintain the LUCs.
- Site 36 - The LTM program includes biennial groundwater sampling for VOCs for MNA at 10 wells, MNA parameters every five years, and semiannual sampling for VOCs in surface water at 4 locations. The findings indicate that groundwater concentrations are steady but relatively low and there are no detections in surface water. The recommended path forward is to continue biennial monitoring and maintain the LUCs.
- Site 73 – The air sparge system met the treatment objectives and the system was turned off in 2012. The LTM program includes biannual groundwater sampling for VOCs at six wells for the biobarrier evaluation, annual groundwater sampling for MNA of VOCs at 30 wells, and MNA parameters every five years. The findings indicated that the biobarrier is effective with an average of 92% reduction in total VOCs based on the first injection. Therefore, a second injection is planned in 2013. The recommended path forward is to continue LTM, optimize the well network as needed, and maintain the LUCs.
- Site 78 – The LTM program includes annual groundwater sampling for VOCs at 38 wells. The findings indicate CVOCs and BTEX concentrations remain consistent over time and degradation is limited. An additional investigation was conducted in 2012-2013 to evaluate potential plume migration. The path forward is to continue pump and treat system operation, conduct a treatability study in the Site 78 South area with EHC (a proprietary organic substrate product) and bioaugmentation to evaluate if bioremediation is a treatment option, update LTM based on results of additional investigation, and maintain the LUCs.
- Site 82 – The LTM program includes annual groundwater sampling for VOCs at 30 wells and semiannual surface water and sediment sampling at three samples locations. The findings indicate VOCs are trending upward in shallow and intermediate wells, VOCs are trending downward in deeper wells, and VOCs have

been detected in surface water and sediment; however, the concentrations are below State standards. Groundwater concentrations over time are variable based on precipitation, contaminant migration, and pump and treat system operation. A RAB member discussed historical VOC concentrations in adjacent potable supply wells and historical impacts to Wallace Creek. An additional groundwater and pore water investigation was conducted 2012-2013 to evaluate potential plume migration. Monitoring is being conducted in Wallace Creek as part of LTM and concentrations are currently below the screening levels. The path forward is to continue pump and treat system operation, update LTM based on results of additional investigation, and maintain the LUCs.

- Site 93 – The LTM program includes annual groundwater sampling for VOCs for MNA at 12 wells and MNA parameters semiannually. The findings indicate VOC concentrations are consistent or declining over time. The path forward is to continue LTM and maintain the LUCs.

Several Records of Decision (RODs) have been completed and LTM will be initiated at Sites 49, 69, and 89. A RAB member asked the status of the Site 69 remedy. The remedy is a RCRA-like cap planned to be implemented in FY 2014.

IV. Henderson and Hickory Ponds Update

Objective: Provide an overview of recent studies on Henderson and Hickory Ponds, final conclusions, and path forward.

Overview: Ms. Rychak reviewed the background and previous investigations activities. In fall 2011, a recreational camp ground was planned around Henderson Pond. Access to the camp ground would require visitors to drive through Site 74, a former cleanup site suspected of containing chemical warfare materiel (CWM). Although the presence of CWM has never been verified it cannot be ruled out due to historic documentation. As a precaution, the Base conducted additional investigation activities and Site 74 was fenced off on both sides of the gravel access road.

The additional investigation was conducted in phases and included soil, surface water, sediment, and fish. As a precaution, in February 2012, notices were mailed to all personnel with active fishing licenses (~2,900 mailings), signs were posted around the pond saying “catch and release”, and a notice was posted on the Game Warden’s website.

In soil beneath the gravel road, there was no unacceptable risk to construction workers (most likely receptor). Although SVOCs and pesticides in soil may result in unacceptable human health risk to future residents and recreational users, the contaminated soil is beneath 0.5 to 1 foot of gravel and LUCs are in place to prevent digging and residential development.

There were no unacceptable risks based on exposure to soil in the campground areas, surface water, or sediment. In fish, potential risks were identified from eating fish due to polychlorinated biphenyls (PCBs) and mercury in fish tissue; however, concentrations fall within reported state and/or national ranges and the risk assessment is conservative, assuming only fish from either Henderson or Hickory Pond is ingested in diet and there is no unacceptable risks if only ¼ of fish ingested in an individual’s diet is from Henderson Pond or Hickory Pond. The Base consulted EPA, NCDENR, and NC Dept Health and Human Services and using a fish advisory and posting signs was determined to be protective of human health.

The Base is posting fish advisory signs and the language on the sign was developed in coordination with NC Department of Health and Human Services. The advisory is generally consistent with existing fish advisories in North Carolina. Information was also posted on www.lejeune.marines.mil/fishing.aspx and has links to existing fish advisories by North Carolina and EPA and information flyers on fish advisories and what they mean.

V. RAB Business

Ms. Rychak proposed the next RAB meeting on Wednesday, August 21, 2013. Suggestions for meeting topics were requested.